

SEQUENCE LISTING

<110> Baker, Brenda
 Bennett, C. Frank
 Butler, Madeline M.
 Shanahan, William R.

<120> ANTISENSE OLIGONUCLEOTIDE MODULATION OF TNF- EXPRESSION

<130> ISPH-0501

<140>
 <141>

<150> US 09/313,932
 <151> 1999-05-18

<150> US 09/166,186
 <151> 1998-10-05

<160> 503

<210> 1
 <211> 3634
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (796..981,1589..1634,1822..1869,2171..2592)

<220>
 <221> exon
 <222> (615)..(981)

<220>
 <221> intron
 <222> (982)..(1588)

<220>
 <221> exon
 <222> (1589)..(1634)

<220>
 <221> intron
 <222> (1635)..(1821)

<220>
 <221> exon
 <222> (1822)..(1869)

<220>
 <221> intron
 <222> (1870)..(2070)

<220>
 <221> exon
 <222> (2171)..(3381)

<300>
 <301> Nedwin, G.E.
 Naylor, S.L.
 Sakaguchi, A.Y.
 Smith, D.
 Jarrett-Nedwin, J.
 Pennica, D.
 Goeddel, D.V.
 Gray, P.W.

<302> Human lymphotoxin and tumor necrosis factor genes: structure,
 homology and chromosomal localization

<303> Nucleic Acids Res.

<304> 13

<305> 17

<306> 6361-6373

<307> 1985-09-11

<308> X02910 Genbank

<309> 1997-02-17

<400> 1

gaattccggg tgatttcaact cccggctgtc caggcttgct ctgctacccc acccagcctt 60

tcctgaggcc tcaagcctgc caccaagccc ccagctcctt ctccccgcag gacccaaaca 120

caggcctcag gactcaacac agcttttccc tccaaccggt tttctctccc tcaacggact 180
 cagctttctg aagccccctc cagttctagt tctatctttt tcttgcatcc tgtctggaag 240
 ttagaaggaa acagaccaca gacctggtcc ccaaaagaaa tggaggcaat aggttttgag 300
 gggcatgggg acgggggttca gcctccaggg tcttacacac aaatcagtca gtggcccaga 360
 agacccccct cggaatcgga gcagggagga tggggagtgt gaggggtatc cttgatgctt 420
 gtgtgtcccc aactttccaa atccccgccc ccgcgatgga gaagaaaccg agacagaagg 480
 tgcagggccc actaccgctt cctccagatg agctcatggg tttctccacc aaggaagttt 540
 tccgctgggt gaatgattct tccccgccc tctctcgc ccagggacat ataaaggcag 600
 ttgttggcac acccagccag cagacgtccc ctacagcaagg acagcagagg accagctaag 660
 agggagagaa gcaactacag accccccctg aaaacaaccc tcagacgcca catccccga 720
 caagctgcca ggcaggttct cttcctctca catactgacc cagggcttca cctctctccc 780
 cctggaaagg acacc atg agc act gaa agc atg atc cgg gac gtg gag ctg 831
 Met Ser Thr Glu Ser Met Ile Arg Asp Val Glu Leu
 1 5 10
 gcc gag gag gcg ctc ccc aag aag aca ggg ggg ccc cag ggc tcc agg 879
 Ala Glu Glu Ala Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg
 15 20 25
 cgg tgc ttg ttc ctc agc ctc ttc tcc ttc ctg atc gtg gca ggc gcc 927
 Arg Cys Leu Phe Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala
 30 35 40
 acc acg ctc ttc tgc ctg ctg cac ttt gga gtg atc ggc ccc cag agg 975
 Thr Thr Leu Phe Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg
 45 50 55 60
 gaa gag gtgagtgcct ggccagcctt catccactct cccacccaag gggaaatgag 1031
 Glu Glu
 agacgcaaga gagggagaga gatgggatgg gtgaaagatg tgcgctgata gggagggatg 1091

agagagaaaa aaacatggag aaagacgggg atgcagaaa agatgtggca agagatgggg 1151
 aagagagaga gagaaagatg gagagacagg atgtctggca catggaaggt gctcactaag 1211
 tgtgtatgga gtgaatgaat gaatgaatga atgaacaagc agatatataa ataagatatg 1271
 gagacagatg tgggggtgtga gaagagagat gggggaagaa acaagtataa tgaataaaga 1331
 tgggtgagaca gaaagagcgg gaaatatgac agctaaggag agagatgggg gagataagga 1391
 gagaagaaga taggggtgtct ggcacacaga agacactcag ggaaagagct gttgaatgct 1451
 ggaaggtgaa tacacagatg aatggagaga gaaaaccaga cacctcaggc ctaagagcgc 1511
 aggccagaca ggcagccagc tgttctctct ttaagggtga ctccctcgat gttaaccatt 1571
 ctcttctctc ccaacag ttc ccc agg gac ctc tct cta atc agc cct ctg 1621
 Phe Pro Arg Asp Leu Ser Leu Ile Ser Pro Leu
 65 70
 gcc cag gca gtc agtaagtgtc tccaaacctc tttcctaatt ctgggtttgg 1673
 Ala Gln Ala Val
 75
 gtttgggggt aggggttagta cgggtatgga agcagtgagg gaaatttaaa gttttggtct 1733
 tgggggagga tggatggagg tgaaagtagg ggggtatttt ctagggaagtt taagggtctc 1793
 agctttttct tttctctctc ctcttca gga tca tct tct cga acc ccg agt gac 1847
 Arg Ser Ser Ser Arg Thr Pro Ser Asp
 80 85
 aag cct gta gcc cat gtt gta ggtaagagct ctgaggatgt gtcttggaac 1898
 Lys Pro Val Ala His Val Val
 90
 ttggagggct aggatttggg gattgaagcc cggtgatgg taggcagaac ttggagacaa 1958
 tgtgagaagg actcgctgag ctcaaggga ggggtggagga acagcacagg ccttagtggg 2018
 atactcagaa cgctatggcc aggtgggatg tgggatgaca gacagagagg acaggaaccg 2078
 gatgtgggggt gggcagagct cgagggccag gatgtggaga gtgaaccgac atggccacac 2138

tgactctcct ctcctctctc cctccctcc a gca aac cct caa gct gag ggg	2190
Ala Asn Pro Gln Ala Glu Gly	
95 100	
cag ctc cag tgg ctg aac cgc cgg gcc aat gcc ctc ctg gcc aat ggc	2238
Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu Leu Ala Asn Gly	
105 110 115	
gtg gag ctg aga gat aac cag ctg gtg gtg cca tca gag ggc ctg tac	2286
Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser Glu Gly Leu Tyr	
120 125 130	
ctc atc tac tcc cag gtc ctc ttc aag ggc caa ggc tgc ccc tcc acc	2334
Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly Cys Pro Ser Thr	
135 140 145	
cat gtg ctc ctc acc cac acc atc agc cgc atc gcc gtc tcc tac cag	2382
His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala Val Ser Tyr Gln	
150 155 160	
acc aag gtc aac ctc ctc tct gcc atc aag agc ccc tgc cag agg gag	2430
Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro Cys Gln Arg Glu	
165 170 175 180	
acc cca gag ggg gct gag gcc aag ccc tgg tat gag ccc atc tat ctg	2478
Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu Pro Ile Tyr Leu	
185 190 195	
gga ggg gtc ttc cag ctg gag aag ggt gac cga ctc agc gct gag atc	2526
Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu Ser Ala Glu Ile	
200 205 210	
aat cgg ccc gac tat ctc gac ttt gcc gag tct ggg cag gtc tac ttt	2574
Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly Gln Val Tyr Phe	
215 220 225	
ggg atc att gcc ctg tga ggaggacgaa catccaacct tcccaaacgc	2622
Gly Ile Ile Ala Leu	
230	
ctccctcgcc ccaatccctt tattaccccc tccttcagac accctcaact tcttctggct	2682
caaaaagaga attgggggct tagggtcgga acccaagctt agaactttaa gcaacaagac	2742
caccacttcg aaacctggga ttcaggaatg tgtggcctgc acagtgaagt gctggcaacc	2802

actaagaatt caaactgggg cctccagaac tcactggggc ctacagcttt gatccctgac 2862

atctgggaatc tggagaccag ggagcctttg gttctggcca gaatgctgca ggacttgaga 2922

agacctcacc tagaaattga cacaagtga ccttaggcct tcctctctcc agatgtttcc 2982

agacttcctt gagacacgga gccacgcctt ccccatggag ccagctccct ctatttatgt 3042

ttgcacttgt gattatttat tatttattta ttatttattt atttacagat gaatgtattt 3102

atttgggaga cgggggtatc ctgggggacc caatgtagga gctgccttgg ctcagacatg 3162

ttttccgtga aaacggagct gaacaatagg ctgttcccat gtagcccccct ggctctgtg 3222

ccttcttttg attatgtttt ttaaaatatt tatctgatta agttgtctaa acaatgctga 3282

tttggtgacc aactgtcact cattgctgag cctctgctcc ccagggggagt tgtgtctgta 3342

atcgccctac tattcagtg gagaataaa agtttgctta gaaaagaaac atggctctct 3402

tcttgggaatt aattctgcat ctgctcttct ttgtgggtgg gaagaagctc cctaagtcct 3462

ctctccacag gctttaagat cctcgggacc cagtccctcc cttagactcc tagggccctg 3522

gagaccctac ataaacaaag cccaacagaa tattcccat ccccaggaa acaagagcct 3582

gaacctaat acctctccct cagggcattg gaattccaa ctctgggaat tc 3634

<210> 2

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2

catgctttca gtgctcat 18

<210> 3

<211> 20

<212> DNA

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3	
tgagggagcg	tctgctggct	20
<210>	4	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	4	
gtgctcatgg	tgtcctttcc	20
<210>	5	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	5	
taatcacaa	tgcaaacata	20
<210>	6	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	6	
taccccggtc	tcccaataa	20
<210>	7	

<211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic
 <400> 7
 agcaccgcct ggagccct 18

<210> 8
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 8
 gctgaggaac aagcaccgcc 20

<210> 9
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 9
 aggcagaaga gcgtggtggc 20

<210> 10
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 10
 aaagtgcagc aggcagaaga 20

<210> 11
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 11
 ttagagagag gtcctg 18

<210> 12
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 12
 tgactgcctg ggccagag 18

<210> 13
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 13
 gggttcgaga agatgac 18

<210> 14
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 14

gggctacagg cttgtcactc

20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic

<400> 15
cccctcagct tgagggtttg

20

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 16
ccattggcca ggagggcatt

20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 17
accaccagct ggttatctct

20

<210> 18
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400>	18	
ctgggagtag	atgaggtaca	20
<210>	19	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	19	
cccttgaaga	ggacctggga	20
<210>	20	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	20	
ggtgtgggtg	aggagcacat	20
<210>	21	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	21	
gtctggtagg	agacggcgat	20
<210>	22	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	22	
gcagagagga	ggttgacctt	20
<210>	23	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	23	
gcttggcctc	agccccctct	20
<210>	24	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	24	
cctcccagat	agatgggctc	20
<210>	25	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	25	
cccttctcca	gctggaagac	20
<210>	26	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	26	
atctcagcgc	tgagtcggtc	20
<210>	27	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	27	
tcgagatagt	cgggccgatt	20
<210>	28	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	28	
aagtagacct	gccagactc	20
<210>	29	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	29	
ggatgttcgt	cctcctcaca	20
<210>	30	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	30	
accctaagcc	cccaattctc	20
<210>	31	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	31	
ccacacattc	ctgaatccca	20
<210>	32	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	32	
aggccccagt	gagttctgga	20
<210>	33	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	33	
gtctccagat	tccagatgtc	20
<210>	34	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	34	
ctcaagtctt	gcagcattct	20
<210>	35	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	35	
tgggtccccc	aggatacccc	20
<210>	36	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	36	
acggaaaaca	tgtctgagcc	20
<210>	37	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	37	
ctccggttttc	acggaaaaca	20

<210>	38	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	38	
gcctattggt	cagctcgtt	20
<210>	39	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	39	
ggtcacccaaa	tcagcattgt t	21
<210>	40	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	40	
gaggctcagc	aatgagtgc	20
<210>	41	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	41	

gccaagctg gcaccgtca

20

<210> 42

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> control sequence

<400> 42

gccgaggtcc atgtcgtaag c

21

<210> 43

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer

<400> 43

caggcggtgc ttgttcct

18

<210> 44

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer

<400> 44

gccagagggc tgattagaga ga

22

<210> 45

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR probe

<400>	45	
cttctccttc	ctgacgtgg	caggc
		25
<210>	46	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	PCR primer	
<400>	46	
gaaggtgaag	gtcggagtc	
		19
<210>	47	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	PCR primer	
<400>	47	
gaagatggtg	atgggatttc	
		20
<210>	48	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	PCR probe	
<400>	48	
caagcttccc	gttctcagcc	
		20
<210>	49	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	control sequence	
<400>	49	
tctgagtagc	agaggagctc	20
<210>	50	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	50	
tgcggtctctc	atttccctt	20
<210>	51	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	51	
tcccatctct	ctccctctct	20
<210>	52	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	52	
cagcgacat	ctttcaccca	20
<210>	53	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	53	
tctctctcat	ccctccctat	20
<210>	54	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	54	
cgtctttctc	catgtttttt	20
<210>	55	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	55	
cacatctctt	tctgcatccc	20
<210>	56	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	56	
ctctcttccc	catctcttgc	20
<210>	57	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	57	
gtctctccat	cttctcttct	20
<210>	58	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	58	
ttccatgtgc	cagacatcct	20
<210>	59	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	59	
atacacactt	agtgagcacc	20
<210>	60	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	60	
ttcattcatt	cattcactcc	20
<210>	61	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	61	
tatatctgct	tggttcattca	20
<210>	62	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	62	
ctgtctccat	atctttattta	20
<210>	63	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	63	
tctcttctca	cacccacat	20
<210>	64	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	64	
cacttggttc	ttcccccatc	20

<210> 65
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 65
 ctcaccatct ttattcatat 20

<210> 66
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 66
 atatttcccg ctctttctgt 20

<210> 67
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 67
 catctctctc cttagctgtc 20

<210> 68
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 68
 tcttctctcc ttatctcccc 20

<210> 69
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 69
 gtgtgccaga caccctatct 20

<210> 70
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 70
 tctttccctg agtgtcttct 20

<210> 71
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 71
 accttccagc attcaacagc 20

<210> 72
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400>	72	
ctccattcat	ctgtgtattc	20
<210>	73	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	73	
tgagggtgtct	ggttttctct	20
<210>	74	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	74	
acacatcctc	agagctctta	20
<210>	75	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	75	
ctagccctcc	aagttccaag	20
<210>	76	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	76	
cggggttcaa	tcccaaatc	20
<210>	77	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	77	
aagttctgcc	taccatcagc	20
<210>	78	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	78	
gtccttctca	cattgtctcc	20
<210>	79	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	79	
ccttccttg	agctcagcga	20
<210>	80	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	80	
ggcctgtgct	gttcctccac	20
<210>	81	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	81	
cgttctgagt	atcccactaa	20
<210>	82	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	82	
cacatccac	ctggccatga	20
<210>	83	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	83	
gtcctctctg	tctgtcatcc	20
<210>	84	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	84	
ccaccccaca	tccggttcct	20
<210>	85	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	85	
tctctggccct	cgagctctgc	20
<210>	86	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	86	
atgtcgggttc	actctccaca	20
<210>	87	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	87	
agaggagagt	cagtggtggcc	20
<210>	88	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	88	
gatcccaaag tagacctgcc		20
<210>	89	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	89	
cagactcggc aaagtcgaga		20
<210>	90	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	90	
tagtcgggcc gattgatctc		20
<210>	91	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	91	
agcgctgagt cggtcaccct		20

<210>	92	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	92	
tctccagctg	gaagaccct	20
<210>	93	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	93	
cccagataga	tgggctcata	20
<210>	94	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	94	
ccagggttg	gcctcagccc	20
<210>	95	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	95	
cctctggggt	ctccctctgg	20

<210> 96
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 96
 caggggctct tgatggcaga 20

<210> 97
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 97
 gaggaggttg accttggctct 20

<210> 98
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 98
 ggtaggagac ggcgatgcgg 20

<210> 99
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400>	99	
ctgatgggtgt	gggtgaggag	20
<210>	100	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	100	
aggcactcac	ctcttcctc	20
<210>	101	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	101	
ccctggggaa	ctgttgggga	20
<210>	102	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	102	
agacacttac	tgactgcctg	20
<210>	103	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	103	
gaagatgatc	ctgaagagga	20
<210>	104	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	104	
gagctctttac	ctacaacatg	20
<210>	105	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	105	
tgaggggtttg	ctggaggggag	20
<210>	106	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	106	
gacgcgctcg	gactatgaag	20
<210>	107	
<211>	7208	
<212>	DNA	
<213>	Mus musculus	

<220>
 <221> CDS
 <222> (4527..4712,5225..5279,5457..5504,5799..6217)

<220>
 <221> exon
 <222> (4371)..(4712)

<220>
 <221> intron
 <222> (4713)..(5224)

<220>
 <221> exon
 <222> (5225)..(5279)

<220>
 <221> intron
 <222> (5280)..(5456)

<220>
 <221> exon
 <222> (5457)..(5504)

<220>
 <221> intron
 <222> (5505)..(5798)

<220>
 <221> exon
 <222> (5799)..(>6972)

<300>
 <301> Semon, D.
 Kawashima, E.
 Jongeneel, C.V.
 Shakhov, A.N.
 Nedospasov, S.A.

<302> Nucleotide sequence of the murine TNF locus, including the
 TNF-alpha (tumor necrosis factor) and TNF-beta (lymphotoxin)
 genes

<303> Nucleic Acids Res.
 <304> 15
 <305> 21
 <306> 9083-9084
 <307> 1987-11-11
 <308> Y00467 Genbank
 <309> 1993-05-11

<400> 107
 gaattctgaa gctccctctg tacagagcat tgggaagcctg ggggtgtacat ttgggggttac 60
 atgatcttgg ggttctaaga gaataccccc aaatcatctt ccagacctgg aacattctag 120
 gacagggttc tcaaccttcc taactccatg accctttaat acagtctctc atgttgtgtg 180
 gaccccaacc atacaattat ttcgttgct atttcataac tgtaatttcg ctgctattat 240
 gaatcataat gtaaatattt gttttaata gaggtttgcc aaagggacct tgcccacagg 300
 ttgagaactg ccgctccaga gagtaagggg acacagttaa gattgttaca caccaggatg 360
 ccccagattt ggggagaggg cactgtaatg gaacttcttg acatgaaact ggcagatgaa 420
 actggcgaaa aaaaaaaaaa aagctgggca gtggtggcac acacctttaa tcccagcact 480
 tgggaggcag aggcaggcgg atttctgagt tctaggccag cctgggtctac agagtgtggt 540
 tcaggacagc cagggtctaca cagagaaacc ctgtctcgaa aaaagcaaaa aaaaaaaaaa 600
 aaaaaaaaaa aaactggcag atgaccagaa aatacagata tattggaata actgtgactt 660
 gaacccccaa agacaagaga ggaaatagcg ctgaaggggc ggcaggcatg tcaagcatcc 720
 agagccctgg gttcgaacct gaaaaaacia aggtgccgct aaccacatgt ggcttcggag 780
 ccctccagac atgacctga tcgacagaga gggaaatgtg cagagaagcc tgtgagcagt 840
 caagggtgca gaagtgtat aaaccatcac tcttcagga accaggcttc cagtcacagc 900
 ccagctgcac cctctccagc aattgctcgg ccgttcaact gaactcctgg gcctgaccca 960
 gctccctgct agtccctcgc gcccacagt ccccggaacc gactcccttt ccagaaagc 1020

agtagtctaa gcccttagcc tgcggttctc tcctaggccc cagcccttcc tgccttcgac 1080
 tgaaacagca gcattcttcta agccctgggg gcttccccc accccagccc cgacctagaa 1140
 cccgcccgct gcctgccaca ctgcgccttc ctctataaag ggaccgcgagc gccagcgccc 1200
 aggacccccc acagcagggt agcctctcct acctgtctc ctggggctta cctcgggtatc 1260
 aggcattcct caggattccta cctcctttct tgagccacag cctttttctat acaacctgcc 1320
 tggatcccca gccttaattgg gtctggctcct cctgtcgtgg ctttgatttt tgggtctgttc 1380
 ctgtggcggc cttatcagtc tctctctctc tctctctctc tctctctctc tctctctctc 1440
 tctctctctc tctctctctc tctctctctc tctctctctc tctctctctc ctgcctctgt 1500
 tagccattgt ctgattctat ggtggagctt tctcttccc ctctgtctct ccttatecct 1560
 gctcaactca ggggtccccc gcctgtcccc tttctgtct gtgcacctgt ctctcagggt 1620
 ggctgtctca gctgggaggt aaggtctgtc ttccgtctgt tccccgcct ccgtacaca 1680
 cacacactct ctctctctct ctccagcaggt tctccacatg acaactgctgc gccgtctcca 1740
 cctcttgagg gtgcttgga cccctcctgt ctctctctg gggtgctgc tggccctgcc 1800
 tctaggggac caggtgagga agcaagagat tgggggtgct ggggtggcct agctaactca 1860
 gagtctaga gtctctctca ctctctcttg tcccagggac tctctggtgt ccgttctctc 1920
 gctgccagga cagcccatcc actccctcag aagcacttga cctatggcat cctgaaacct 1980
 gctgctcacc ttgttggtaa acttctgcct ccagaggaga ggtccagtc ctgccttttg 2040
 tctacttgcc ccaggggctc aggcgatctt cccatctccc cacaccaact tttcttacc 2100
 ctaagggcag gcaccccaact cccatctccc taccacccat ccaacttgc cagtgcctgc 2160
 tctcaggga tggggacctc tgatcttgat agcccccaa tgtcttgctc ctcttcccag 2220
 ggtacccag caagcagaac tcaactgctc ggagagcaag cagggatcgt gccttctctc 2280

gacatggcctt ctctttgagc aacaactccc tctgatcccc caccagtggc ctctactttg 2340
 tctactccca ggtggttttc tctggagaaa gctgctcccc cagggccatt cccactccca 2400
 tctacctggc acacgaggtc cagctctttt cctccaata ccccttccat gtgcctctcc 2460
 tcagtgcgca gaagtctgtg tatccgggac ttcaaggacc gtgggtgcgc tcaatgtacc 2520
 agggggctgt gttctctctc agtaaggagg accagctgtc caccacacac gacggcatct 2580
 cccatctaca cttcagcccc agcagtgtat tctttggagc ctttgcactg tagattctaa 2640
 agaaacccaa gaattggatt ccaggcctcc atcctgacgc ttgtttcaag ggtcacatcc 2700
 ccacagtctc cagccttccc cactaaaata acctggagct ctcacgggag tctgagacac 2760
 ttcagggggc tacatcttcc ccagggccac tcagatgct caggggacga ctcaagccta 2820
 cctagaagtt cctgcacaga gcagggtttt tgtgggtcta ggtcggacag agacctggac 2880
 atgaaggagg gacagacatg ggagagggtg ctgggaacag ggaagggtg actatttatg 2940
 gagagaaaag ttaagttatt tatttataga gaatagaaag aggggaaaaa tagaaagccg 3000
 tcagatgaca actagggtccc agacacaaaag gtgtctcacc tcagacagga cccatctaag 3060
 agagagatgg cgagagaatt agatgtgggt gaccaagggg ttctagaaga aagcacgaag 3120
 ctctaaaagc cagccactgc ttggctagac atccacaggg accccctgca ccatctgtga 3180
 aaccaataa acctcttttc tctgagatte tgtctgtctg tgtctgtctt gcgttggggg 3240
 agaaacttcc tggctctctt aaggagtgga gcaggggaca gaggcctcag ttggtccatg 3300
 ggatccgggc agagcaaaga gacatgagga gcaggcagct cccagagaca tgggtggattc 3360
 acgggagtga ggcagcttaa ctgccgagag acccaaagga tgagctaggg agatccatcc 3420
 aagggtggag agagatgagg gttctgggga gaagtgactc cactggaggg tgggagagtg 3480
 tttaggagtg ggaggggtgg ggaggggaat ccttggaaga ccggggagtc atacggattg 3540

ggagaaatcc tggagcagc gctgtgggac ctaaatgtct gagttgatgt accgcagtc 3600
 agatatggca gaggtccgt ggaaaactca cttgggagca gggacccaaa gcagcagcct 3660
 gagctcatga tcagagtga aggagaaggc ttgtgaggtc cgtgaattcc cagggctgag 3720
 ttcattccct ctgggtgcc ccatactcat ccattaccc cccccaccag cctcccaaa 3780
 gcccattcac acttcccaac tctcaagctg ctctgcttc agccacttc tccaagaact 3840
 caaacagggg gctttccctc ctcaatatca tgtctcccc cttatgcacc cagctttcag 3900
 aagcaccccc ccattgctaag ttctcccca tggatgtccc atttagaaat caaaaggaaa 3960
 tagacacagg catggtcttt ctacaaagaa acagacaatg attagctctg gaggacagag 4020
 aagaaatggg ttctagtctt cagggctcta tacaacacac acacacacac acacacacac 4080
 acacacacac acacaccctc ctgattggcc ccagattgcc acagaatcct ggtggggagc 4140
 acgggggaga gattccttga tgcttgggtg tccccaactt tccaaacctc ctgccccgc 4200
 gatggagaag aaaccgagac agaggtgtag ggccactacc gcttcctcca catgagatca 4260
 tggttttctc caccaaggaa gttttccgag ggttgaatga gagcttttcc ccgccctctt 4320
 cccaagggc tataaaggcg gccgtctgca cagccagcca gcagaagctc cctcagcgag 4380
 gacagcaagg gactagccag gagggagaac agaaactcca gaacatcttg gaaatagctc 4440
 ccagaaaagc aagcagccaa ccaggcaggt tctgtccctt tcaactactg gcccaaggcg 4500
 ccacatctcc ctccagaaaa gacacc atg agc aca gaa agc atg atc cgc gac 4553
 Met Ser Thr Glu Ser Met Ile Arg Asp

1

5

gtg gaa ctg gca gaa gag gca ctc ccc caa aag atg ggg ggc ttc cag 4601
 Val Glu Leu Ala Glu Glu Ala Leu Pro Gln Lys Met Gly Gly Phe Gln
 10 15 20 25
 aac tcc agg cgg tgc cta tgt ctc agc ctc ttc tca ttc ctg ctt gtg 4649
 Asn Ser Arg Arg Cys Leu Cys Leu Ser Leu Phe Ser Phe Leu Leu Val

gca ggg gcc acc acg ctc ttc tgt cta ctg aac ttc ggg gtg atc ggt 4697
 Ala Gly Ala Thr Thr Leu Phe Cys Leu Leu Asn Phe Gly Val Ile Gly
 45 50 55

ccc caa agg gat gag gtgagtgtct gggcaacctt tattctctgct cacaagcaaa 4752
 Pro Gln Arg Asp Glu
 60

acgggttagg agggcaagaa ggacagtgtg agggaaagaa gtgggctaata gggcagggca 4812

aggtggagga gagtgtggag gggacagagt caggacctcg gacctatcgc tccagctgac 4872

taaacatcct tcgtcggatg cacagagaga tgaatgaacg aacaagtgtg ttcacacgtg 4932

gagagatctg gaaagatgtg gccaggggaa gaggggataa gcaagagata aaactcagag 4992

acagaaatga gagagggcatg agagataagg aggaagatga aggggagata acgggagatc 5052

aagcacagag ggcacccgag aaagaagccg tgggttgagc agatgaatga atgaagaaga 5112

aaacacaaag tgggggggtg gtggggcaaa gaggaactgt aagcggggca atcagccggg 5172

agcttctcct ttgggggtgag tctgtcttaa ctaacctcct ttctctacac ag aag ttc 5230
 Lys Phe

cca aat ggc ctc cct ctc atc agt tct atg gcc cag acc ctc aca ctc 5278
 Pro Asn Gly Leu Pro Leu Ile Ser Ser Met Ala Gln Thr Leu Thr Leu
 65 70 75 80

agtaagtgtt cccacaccto tctettaatt taagatggag aagggcagtt aggcattggga 5338
 Arg

tgagatgggg tgggggggaaa acttaaagct ttgggtttggg aggaagggg tctaagtga 5398

tagatgcttg ctgggaagcc taaaaggctc atccttgect ttgtctcttc cctctca 5455

gga tca tct tct caa aat tcg agt gac aag cct gta gcc cac gtc gta 5503
 Ser Ser Ser Gln Asn Ser Ser Asp Lys Pro Val Ala His Val Val
 85 90 95

ggtaagatgt ctttacatgt gccttgagaa tgaaggggca tgattttggg gggcgggttg 5663
 aggggtgtcg agccaggctg agaaaagaca gagctcttag agacagcacg tgagagtcag 5623
 agcagtgact caaaagcaag gcatacagggg gccacccggg acctcatagc caatgggatg 5683
 tggaaagaca gaggggtcgag gaaccggaag tgaagtgtgg gttagctgctg aggcctcagga 5743
 tgtggagtgt gaactaagag ggtgacactg actcaatcct cccccccccc ctca gca 5800
 Ala
 aac cac caa gtg gag gag cag ctg gag tgg ctg agc cag cgc gcc aac 5848
 Asn His Gln Val Glu Glu Gln Leu Glu Trp Leu Ser Gln Arg Ala Asn
 100 105 110
 gcc ctg ctg gcc aac ggc atg gat ctg aaa gac aac caa cta gtg gtg 5896
 Ala Leu Leu Ala Asn Gly Met Asp Leu Lys Asp Asn Gln Leu Val Val
 115 120 125
 cca gcc gat ggg ttg tac ctt gtc tac tcc cag gtt ctg ttc aag gga 5944
 Pro Ala Asp Gly Leu Tyr Leu Val Tyr Ser Gln Val Leu Phe Lys Gly
 130 135 140 145
 caa ggc tgc ccc gac tac gtg ctg ctg acc cac acc gtc agc cga ttt 5992
 Gln Gly Cys Pro Asp Tyr Val Leu Leu Thr His Thr Val Ser Arg Phe
 150 155 160
 gct atc tca tac cag gag aaa gtc aac ctg ctg tct gcc gtc aag agc 6040
 Ala Ile Ser Tyr Gln Glu Lys Val Asn Leu Leu Ser Ala Val Lys Ser
 165 170 175
 ccc tgc ccc aag gac acc cct gag ggg gct gag ctg aaa ccc tgg tat 6088
 Pro Cys Pro Lys Asp Thr Pro Glu Gly Ala Glu Leu Lys Pro Trp Tyr
 180 185 190
 gag ccc ata tac ctg gga gga gtc ttc cag ctg gag aag ggg gac caa 6136
 Glu Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Gln
 195 200 205
 ctg agc gct gag gtc aat ctg ccc aag tac tta gac ttt gcg gag tcc 6184
 Leu Ser Ala Glu Val Asn Leu Pro Lys Tyr Leu Asp Phe Ala Glu Ser
 210 215 220 225

ggg cag gtc tac ttt gga gtc att gct ctg tga aggggaatggg tgttcatcca 6237
 Gly Gln Val Tyr Phe Gly Val Ile Ala Leu
 230 235

ttctctaccc agcccccaact ctgacccctt tactctgacc cctttattgt ctactcctca 6297
 gagccccag tctgtgtcct tctaacttag aaaggggatt atgggtcaga gtccaactct 6357

gtgctcagag ctttcaacaa ctactcagaa acacaagatg ctgggacagt gacctggact 6417

gtgggcctct catgcaccac catcaaggac tcaaatgggc tttccgaatt cactggagcc 6477

tcgaatgtcc attcctgagt tctgcaaagg gagagtggtc aggttcctct tgtctcagaa 6537

tgaggctgga taagatctca ggccttctta ccttcagacc tttccagact cttccctgag 6597

gtgcaatgca cagccttctt cacagagcca gccccctctt atttatattt gcacttatta 6657

tttattattt atttattatt tatttatttg cttatgaatg tatttatttg gaaggccggg 6717

gtgtcctgga ggacccagtg tgggaagctg tcttcagaca gacatgtttt ctgtgaaaac 6777

ggagctgagc tgtccccacc tggcctctct accttgttgc ctctctttt gcttatgttt 6837

aaaacaaat atttatctaa cccaattgtc ttaataacgc tgatttggtg accaggctgt 6897

cgctacatca ctgaacctct gctccccacg ggagccgtga ctgtaattgc cctacagtca 6957

attgagagaa ataaagatcg cttggaaaag aaatgtgatt tctgtcttgg gatgaagtct 7017

gcatccatct ctttgcggag gcctaaagtc tctgggtcca gatctcagtc tttatacccc 7077

tgggccatta agacccccaa gacccccgtg gaacaaaagg cagccaacat ccctacctct 7137

cccccgaaa caggagccta accctaatta cctttgccct ggggcatggg aatttccac 7197

tctgggaatt c 7208

<210> 108
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>		
<223>	Synthetic	
<400>	108	
gagcttctgctc tggctggctg		20
<210>	109	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	109	
ccttgctgtc ctcgctgagg		20
<210>	110	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	110	
tcatggtgtc tttctggag		20
<210>	111	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	111	
ctttctgtgc tcatggtgtc		20
<210>	112	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	112	
gcggatcatg	ctttctgtgc	20
<210>	113	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	113	
gggaggccat	ttgggaactt	20
<210>	114	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	114	
cgaatttga	gaagatgac	20
<210>	115	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	115	
ctctccact	tggtggttg	20
<210>	116	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	116	
cctgagatct	tatccagcct	20
<210>	117	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	117	
caattacagt	cacggctccc	20
<210>	118	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<400>	118	
cccttcattc	tcaaggcaca	20
<210>	119	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	119	
caccctcaa	ccgcccccc	20
<210>	120	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>
 <223> Synthetic

<400> 120
 agagctctgt cttttctcag 20
 <210> 121
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 121
 cactgctctg actctcacgt 20
 <210> 122
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 122
 atgaggtccc ggggtggcccc 20
 <210> 123
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 123
 caccctctgt ctttccacat 20
 <210> 124
 <211> 20
 <212> DNA

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	124	
ctccacatcc	tgagcctcag	20
<210>	125	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	125	
attgagtcag	tgtcaccctc	20
<210>	126	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	126	
gctggctcag	ccactccagc	20
<210>	127	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	127	
tctttgagat	ccatgccgtt	20
<210>	128	

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic
 <400> 128
 aacccatcgg ctggcaccac

20

<210> 129
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 129
 gtttgagctc agccccctca

20

<210> 130
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 130
 ctctctccag gtatatgggc

20

<210> 131
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 131
 tgagttggtc ccccttctcc

20

<210> 132
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 132
 caaagtagac ctgcccggac 20

<210> 133
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 133
 acaccattc ctttcacaga 20

<210> 134
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 134
 cataatcccc tttctaagtt 20

<210> 135
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 135

cacagagttg gactctgagc	20
<210> 136	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 136	
cagcatcttg tgtttctgag	20
<210> 137	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 137	
cacagtccag gtcactgtcc	20
<210> 138	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 138	
tgatggtggt gcatgagagg	20
<210> 139	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	139	
gtgaattcgg aaagccatt		20
<210>	140	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	140	
cctgaccact ctccctttgc		20
<210>	141	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	141	
tgcacccccc aggccaccat		20
<210>	142	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	142	
gccgaggtcc atgtcgtacg c		21
<210>	143	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	143	
tcaagcagtg	ccaccgatcc	20
<210>	144	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	144	
agtgtcttct	gtgtgccaga	20
<210>	145	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	145	
gtgtcttctg	tgtgccagac	20
<210>	146	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	146	
tgtcttctgt	gtgccagaca	20
<210>	147	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	147	
gtcttctgtg	tgccagacac	20
<210>	148	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	148	
tcttctgtgt	gccagacacc	20
<210>	149	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	149	
cttctgtgtg	ccagacaccc	20
<210>	150	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	150	
ttctgtgtgc	cagacaccct	20
<210>	151	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	151	
tctgtgtgcc	agacacccta	20
<210>	152	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	152	
ctgtgtgccca	gacaccctat	20
<210>	153	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	153	
tgtgtgccag	acaccctatc	20
<210>	154	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	154	
tgtgccagac	acccatatctt	20
<210>	155	

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic
 <400> 155
 gtgccagaca cctatcttc

20

<210> 156
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 156
 tgccagacac cctatcttct

20

<210> 157
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 157
 gccagacacc ctatcttctt

20

<210> 158
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 158
 ccagacaccc tatcttcttc

20

<210> 159
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 159
 cagacaccct atcttcttct

20

<210> 160
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 160
 agacacccta tcttcttctc

20

<210> 161
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 161
 gacaccctat cttcttctct

20

<210> 162
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 162

acaccctatc	tctttctctc	20
<210>	163	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	163	
caccctatct	tctttctctc	20
<210>	164	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	164	
gtcttctgtg	tgccagac	18
<210>	165	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	165	
tcttctgtgt	gccagaca	18
<210>	166	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	

<400>	166	
cttctgtgtg	ccagacac	18
<210>	167	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	167	
ttctgtgtgc	cagacacc	18
<210>	168	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	168	
tctgtgtgcc	agacaccc	18
<210>	169	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	169	
ctgtgtgcca	gacaccct	18
<210>	170	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	

<400>	170	
tgtgtgccag acacccta		18
<210>	171	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	171	
gtgtgccaga caccctat		18
<210>	172	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	172	
tgtgtccagac accctatc		18
<210>	173	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	173	
tgccagacac cctatctt		18
<210>	174	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	174	
gccagacacc	ctatcttc	18
<210>	175	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	175	
ccagacaccc	tatcttct	18
<210>	176	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	176	
cagacaccct	atcttctt	18
<210>	177	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	177	
agacacccta	tcttcttc	18
<210>	178	
<211>	18	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	178	
gacaccctat	cttcttct	18
<210>	179	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	179	
acaccctatc	ttcttctc	18
<210>	180	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	180	
agagggttgg	agacacttac	20
<210>	181	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	181	
gaattaggaa	agagggttgg	20
<210>	182	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	182	
cccaaaccga	gaattaggaa	20
<210>	183	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	183	
tacccccaaa	cccaaaccga	20
<210>	184	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	184	
gtactaacc	tacccccaaa	20
<210>	185	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	185	
ttccataccg	gtactaacc	20

<210> 186
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 186
 cccccactgc ttccataccg 20

<210> 187
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 187
 ctttaaattt cccccactgc 20

<210> 188
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 188
 aagaccaaaa ctttaaattt 20

<210> 189
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 189

atcctccccc aagaccaaaa

20

<210>	190
<211>	20
<212>	DNA
<213>	Artificial Sequence
<220>	
<223>	Synthetic

```
<400>      190
acctccatcc atcctccccc
```

20

<210>	191
<211>	20
<212>	DNA
<213>	Artificial Sequence
<220>	
<223>	Synthetic

<400> 191
ccctaatttc acctccatcc

20

<210>	192
<211>	20
<212>	DNA
<213>	Artificial Sequence
<220>	
<223>	Synthetic

<400> 192
gaaaataccc ccctactttc

20

<210>	193
<211>	20
<212>	DNA
<213>	Artificial Sequence
<220>	
<223>	Synthetic

<400>	193	
aaacttccta	gaaaaatacc	20
<210>	194	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	194	
tgagaccctt	aaacttccta	20
<210>	195	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	195	
aagaaaaagc	tgagaccctt	20
<210>	196	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	196	
ggagagagaa	aagaaaaagc	20
<210>	197	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	

<400>	197	
tgagccagaa	gaggttgagg	20
<210>	198	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	198	
attctctttt	tgagccagaa	20
<210>	199	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	199	
taagcccca	attctctttt	20
<210>	200	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	200	
gttcgaccc	taagcccca	20
<210>	201	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	201	
ctaagcttgg gttccgaccc		20
<210>	202	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	202	
gcttaaagtt ctaagcttgg		20
<210>	203	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	203	
tggtcttgtt gcttaaagtt		20
<210>	204	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	204	
ttcgaagtgg tggtcttgtt		20
<210>	205	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	205	
aatcccaggt ttcgaagtgg		20
<210>	206	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	206	
cacattcctg aatcccaggt		20
<210>	207	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	207	
gtgcaggcca cacattcctg		20
<210>	208	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	208	
gcacttcact gtgcaggcca		20
<210>	209	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	209	
gtggttgcca	gcacttcact	20
<210>	210	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	210	
tgaattctta	gtggttgcca	20
<210>	211	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	211	
ggccccagtt	tgaattctta	20
<210>	212	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	212	
gagttctgga	ggccccagtt	20

<210> 213
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 213
 aggccccagt gagttctgga 20

<210> 214
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 214
 tcaaagctgt aggccccagt 20

<210> 215
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 215
 atgtcaggga tcaaagctgt 20

<210> 216
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 216
 cagattccag atgtcaggga 20

<210> 217
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 217
 ccctgggtctc cagattccag 20

<210> 218
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 218
 accaaaggct ccctgggtctc 20

<210> 219
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 219
 tctggccaga accaaaggct 20

<210> 220
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400>	220	
cctgcagcat	tctggccaga	20
<210>	221	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	221	
cttctcaagt	cctgcagcat	20
<210>	222	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	222	
taggtgaggt	cttctcaagt	20
<210>	223	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	223	
tgtcaatttc	taggtgaggt	20
<210>	224	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	224	
ggtcacttg	tgtaatttc	20
<210>	225	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	225	
gaaggcctaa	ggtcacttg	20
<210>	226	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	226	
ctggagagag	gaaggcctaa	20
<210>	227	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	227	
ctggaaacat	ctggagagag	20
<210>	228	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	228	
tcaaggaagt	ctggaaacat	20
<210>	229	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	229	
gctccgtgtc	tcaaggaagt	20
<210>	230	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	230	
ataaatacat	tcattctgtaa	20
<210>	231	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	231	
ggtctcccaa	ataaatacat	20
<210>	232	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	232	
aggatacccc	ggtctcccaa	20
<210>	233	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	233	
tgggtccccc	aggatacccc	20
<210>	234	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	234	
gtcctacat	tgggtccccc	20
<210>	235	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	235	
agccaaggca	gtcctacat	20
<210>	236	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	236	
aacatgtctg	agccaaggca	20
<210>	237	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	237	
tttcacggaa	aacatgtctg	20
<210>	238	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	238	
tcagctccgt	tttcacggaa	20
<210>	239	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	239	
agcctattgt	tcagctccgt	20

<210> 240
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 240
 acatgggaac agcctattgt 20

<210> 241
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 241
 atcaaaagaa ggacacagagg 20

<210> 242
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 242
 gtttagacaa ctttaatcaga 20

<210> 243
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 243

aatcagcatt gtttagacaa	20
<210> 244	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 244	
ttggtcacca aatcagcatt	20
<210> 245	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 245	
tgagtgcagc ttggtcacca	20
<210> 246	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 246	
ggctcagcaa tgagtgcagc	20
<210> 247	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	247	
attacagaca	caactccct	20
<210>	248	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	248	
tagtagggcg	attacagaca	20
<210>	249	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	249	
cgccactgaa	tagtagggcg	20
<210>	250	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	250	
ctttatttct	cgccactgaa	20
<210>	251	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	251	
ctgaggggagc	gtctgctggc	20
<210>	252	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	252	
ccttgctgag	ggagcgtctg	20
<210>	253	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	253	
ctggtcctct	gtgttccttg	20
<210>	254	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	254	
cctctgctgt	ccttgctgag	20
<210>	255	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	255	
ttctctccct	cttagctggg	20
<210>	256	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	256	
tccctcttag	ctggctctct	20
<210>	257	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	257	
tctgagggtt	gttttcaggg	20
<210>	258	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	258	
ctgtagtggc	ttctctccct	20
<210>	259	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	259	
acctgcctgg	cagcttgtca	20
<210>	260	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	260	
ggatgtggcg	tctgagggtt	20
<210>	261	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	261	
tgtgagagga	agagaacctg	20
<210>	262	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	262	
gaggaagaga	acctgcctgg	20
<210>	263	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	263	
agccgtgggt	cagtatgtga	20
<210>	264	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	264	
tgggtcagta	tgtgagagga	20
<210>	265	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	265	
gagaggggtga	agccgtgggt	20
<210>	266	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	266	
tcattggtgc	ctttccaggg	20

<210> 267
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 267
 ctttcagtg ctcaggtgtc 20

<210> 268
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 268
 tcatgctttc agtgctcatg 20

<210> 269
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 269
 acgtcccgga tcatgctttc 20

<210> 270
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 270

gctccacgtc ccgcatcatg 20

<210> 271
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic

<400> 271
tcctcggcca gctccacgtc 20

<210> 272
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272
gcgcctctcc ggccagctcc 20

<210> 273
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
aggaacaagc accgcctgga 20

<210> 274
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400>	274	
caagcaccgc	ctggagccct	20
<210>	275	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	275	
aaggagaaga	ggctgaggaa	20
<210>	276	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	276	
gaagaggctg	aggaacaagc	20
<210>	277	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	277	
cctgccacga	tcaggaagga	20
<210>	278	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	278	
cacgatcagg	aaggagaaga	20
<210>	279	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	279	
aagagcgtgg	tggcgccctgc	20
<210>	280	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	280	
cgtaggtggcg	cctgccacga	20
<210>	281	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	281	
aagtgcagca	ggcagaagag	20
<210>	282	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	282	
cagcaggcag	aagagcgtgg	20
<210>	283	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	283	
gatcactcca	aagtgcagca	20
<210>	284	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	284	
gggccgatca	ctccaaagtg	20
<210>	285	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	285	
gggccagagg	gctgattaga	20
<210>	286	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	286	
agagggctga	ttagagagag	20
<210>	287	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	287	
gctacaggct	tgtcactcgg	20
<210>	288	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	288	
ctgactgcct	gggccagagg	20
<210>	289	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	289	
tacaacatgg	gctacaggct	20
<210>	290	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	290	
agccactgga	gctgccctc	20
<210>	291	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	291	
ctggagctgc	ccctcagctt	20
<210>	292	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	292	
ttggcccggc	ggttcagcca	20
<210>	293	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	293	
ttggccagga	gggcattggc	20

<210> 294
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 294
 ccggcgggttc agccactgga 20

<210> 295
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 295
 ctcagctcca cgccattggc 20

<210> 296
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 296
 caggagggca ttggcccggc 20

<210> 297
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 297

ctccacgccca ttggccagga	20
<210> 298	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 298	
accagctggt tatctctcag	20
<210> 299	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 299	
ctgggttatct ctcagctcca	20
<210> 300	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 300	
ccctctgatg gcaccaccag	20
<210> 301	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	301	
tgatggcacc	accagctggt	20
<210>	302	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	302	
tagatgaggt	acagggccctc	20
<210>	303	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	303	
aagaggacct	gggagtagat	20
<210>	304	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	304	
gaggtacagg	ccctctgatg	20
<210>	305	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	305	
cagccttggc	ccttgaagag	20
<210>	306	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	306	
gacctgggag	tagatgaggt	20
<210>	307	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	307	
ttggcccttg	aagaggacct	20
<210>	308	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	308	
tggtgtgggt	gaggagcaca	20
<210>	309	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	309	
cggcgatgcg	gctgatgggtg	20
<210>	310	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	310	
tgggtgagga	gcacatgggt	20
<210>	311	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	311	
tggtctggta	ggagacggcg	20
<210>	312	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	312	
atgcggctga	tggtgtgggt	20
<210>	313	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	313	
agaggaggtt	gaccttggtc	20
<210>	314	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	314	
tggtaggagac	ggcgatgcg	20
<210>	315	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	315	
aggttgacct	tggtctggtgta	20
<210>	316	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	316	
ggctcttgat	ggcagagagg	20
<210>	317	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	317	
tcataccaggg	cttggcctc	20
<210>	318	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	318	
ttgatggcag	agaggaggtt	20
<210>	319	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	319	
agctggaaga	cccctcccag	20
<210>	320	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	320	
atagatgggc	tcataccagg	20

<210> 321
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 321
 cggtcacccct tctccagctg 20

<210> 322
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 322
 gaagacccct cccagataga 20

<210> 323
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 323
 acccttctcc agctggaaga 20

<210> 324
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 324

tcggcaaagt cgagatagtc	20
<210> 325	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 325	
gggccgattg atctcagcgc	20
<210> 326	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 326	
tagacctgcc cagactcggc	20
<210> 327	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 327	
aaagtcgaga tagtcggggc	20
<210> 328	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	328	
gcaatgatcc	caaagtagac	20
<210>	329	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	329	
ctgcccagac	tcggcaaagt	20
<210>	330	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	330	
cgctctcttc	acagggcaat	20
<210>	331	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	331	
ggaaggttgg	atgttcgtcc	20
<210>	332	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	332	
tcctcacagg	gcaatgatcc	20
<210>	333	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	333	
gttgagggtg	tctgaaggag	20
<210>	334	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	334	
gttggatgtt	cgtcctctc	20
<210>	335	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	335	
tttgagccag	aagaggttga	20
<210>	336	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	336	
gaggcggttg	ggaagggttg	20
<210>	337	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	337	
gcccccaatt	ctctttttga	20
<210>	338	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	338	
gccagaagag	gttgaggggtg	20
<210>	339	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	339	
gggttccgac	cctaagcccc	20
<210>	340	
<211>	20	
<212>	DNA	

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 340

caattctctt ttgagccag 20

<210> 341

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 341

taaagttcta agcttgggtt 20

<210> 342

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 342

ccgaccctaa gccccaatt 20

<210> 343

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 343

ggtggtcttg ttgcttaaag 20

<210> 344

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic
 <400> 344
 ttctaagctt gggttccgac

20

<210> 345
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 345
 cccaggtttc gaagtgggtg

20

<210> 346
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 346
 tcttgttgct taaagttcta

20

<210> 347
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 347
 cacacattcc tgaatcccag

20

<210> 348
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 348
 gtttcgaagt ggtggtcttg 20

<210> 349
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 349
 cttcactgtg caggccacac 20

<210> 350
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 350
 attcctgaat cccaggtttc 20

<210> 351
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 351

tagtggttgc cagcacttca	20
<210> 352	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 352	
cccagtttga attcttagtg	20
<210> 353	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 353	
ctgtgcaggc cacacattcc	20
<210> 354	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 354	
gtgagttctg gaggccccag	20
<210> 355	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	355	
gttgccagca cttcactgtg		20
<210>	356	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	356	
tttgaattct tagtggttgc		20
<210>	357	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	357	
aagctgtagg cccagtgag		20
<210>	358	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	358	
ttctggaggc cccagtttga		20
<210>	359	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	359	
agatgtcagg	gatcaaagct	20
<210>	360	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	360	
tgggtctccag	attccagatg	20
<210>	361	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	361	
gtaggcccca	gtgagttctg	20
<210>	362	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	362	
gaaccaaagg	ctccctggtc	20
<210>	363	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	363	
tcagggatca	aagctgtagg	20
<210>	364	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	364	
tccagattcc	agatgtcagg	20
<210>	365	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	365	
gcagcattct	ggccagaacc	20
<210>	366	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	366	
gtcttctcaa	gtcctgcagc	20
<210>	367	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	367	
aaaggctccc	tggtctccag	20
<210>	368	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	368	
caatttctag	gtgaggcttt	20
<210>	369	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	369	
attctggcca	gaaccaaagg	20
<210>	370	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	370	
aagggtccact	tgtgtcaatt	20
<210>	371	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	371	
gagagaggaa ggctaaggt		20
<210>	372	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	372	
tctaggtgag gtcttctcaa		20
<210>	373	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	373	
ccacttggt caatttctag		20
<210>	374	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	374	
gtctggaaac atctggagag		20

<210> 375
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 375
 ccgtgtctca aggaagtctg 20

<210> 376
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 376
 aggaaggcct aaggtccact 20

<210> 377
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 377
 gagggagctg gctccatggg 20

<210> 378
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400>	378	
gaaacatctg gagagaggaa		20
<210>	379	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	379	
gtgcaaacat aaatagaggg		20
<210>	380	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	380	
tctcaaggaa gtctggaaac		20
<210>	381	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	381	
aataaataat cacaagtgca		20
<210>	382	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	382	
gggctgggct	ccgtgtctca	20
<210>	383	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	383	
taccccggtc	tcccaaataa	20
<210>	384	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	384	
aacataaata	gagggagctg	20
<210>	385	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	385	
ttgggtcccc	caggataccc	20
<210>	386	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	386	
ataatcacao	gtgcaaacat	20
<210>	387	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	387	
aaggcagctc	ctacattggg	20
<210>	388	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	388	
cggtctccca	aataaatata	20
<210>	389	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	389	
aaacatgtct	gagccaaggc	20
<210>	390	
<211>	20	

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 390
tccccagga taccgggc 20

<210> 391
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 391
agctcctaca ttgggtcccc 20

<210> 392
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 392
tgtctgagcc aaggcagctc 20

<210> 393
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 393
cagcctattg ttcagctccg 20

<210> 394
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 394
 agaaggcaca gaggccaggg 20

<210> 395
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 395
 ttttcacgga aaacatgtct 20

<210> 396
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 396
 tattgttcag ctcggttttc 20

<210> 397
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 397

aaaaacataa tcaaaagaag	20
<210> 398	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 398	
cagataaata ttttaaaaaa	20
<210> 399	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 399	
tacatgggaa cagcctattg	20
<210> 400	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 400	
tttagacaac ttaatcagat	20
<210> 401	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	401	
cataatcaaa	agaaggcaca	20
<210>	402	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	402	
accaaatacag	cattgttttag	20
<210>	403	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	403	
aaatatttta	aaaaacataa	20
<210>	404	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	404	
gagtgacagt	tggtcaccaa	20
<210>	405	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	405	
acaacttaatc agataaata		20
<210>	406	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	406	
cagaggctca gcaatgagtg		20
<210>	407	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	407	
atcagcattg tttagacaac		20
<210>	408	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	408	
agggcgatta cagacacaac		20
<210>	409	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	409	
acagttgggc	accaaatacag	20
<210>	410	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	410	
tcgccactga	atagtagggc	20
<210>	411	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	411	
gctcagcaat	gagtgacagt	20
<210>	412	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	412	
agcaaaacttt	atttctcgcc	20
<210>	413	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	413	
gattacagac acaactcccc		20
<210>	414	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	414	
actgaatagt agggcgatta		20
<210>	415	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	415	
acattatttc tcgccactga		20
<210>	416	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	416	
gctgtccttg ctgaggagc		20
<210>	417	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	417	
cttagctggt	cctctgctgt	20
<210>	418	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	418	
gttgcttctc	tcctcttag	20
<210>	419	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	419	
tggcgtctga	gggtgtttt	20
<210>	420	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	420	
agagaacctg	cctggcagct	20

<210> 421
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 421
 cagtatgtga gaggaagaga 20

<210> 422
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 422
 ggtgaagccg tgggtcagta 20

<210> 423
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 423
 agtgctcatg gtgtcctttc 20

<210> 424
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 424

ccggaatcatg ctttcagtgc	20
<210> 425	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 425	
ggccagctcc acgtcccgga	20
<210> 426	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 426	
ggccccctg tcttcttggg	20
<210> 427	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 427	
ggctgaggaa caagcaccgc	20
<210> 428	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	428	
tcaggaagga	gaagaggctg	20
<210>	429	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	429	
tggcgctgc	cacgatcagg	20
<210>	430	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	430	
ggcagaagag	cgtggtggcg	20
<210>	431	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	431	
ctccaaagtg	cagcaggcag	20
<210>	432	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	432	
gctgattaga gagaggtccc		20
<210>	433	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	433	
tgccctgggccc agaggggtga		20
<210>	434	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	434	
gctgcccctc agcttgaggg		20
<210>	435	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	435	
ggttcagcca ctggagctgc		20
<210>	436	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	436	
gggcattggc	ccggcgggttc	20
<210>	437	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	437	
cgccattggc	caggagggca	20
<210>	438	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	438	
tatctctcag	ctccaegcca	20
<210>	439	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	439	
gcaccaccag	ctggttatct	20
<210>	440	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	440	
acaggccctc	tgatggcacc	20
<210>	441	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	441	
gggagtagat	gaggtacagg	20
<210>	442	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	442	
ccttgaagag	gacctgggag	20
<210>	443	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	443	
gaggagcaca	tgggtggagg	20
<210>	444	

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic
 <400> 444
 gctgatgggtg tgggtgagga

20

<210> 445
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 445
 ggagacggcg atgcggctga

20

<210> 446
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 446
 gaccttggtc tggtaggaga

20

<210> 447
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 447
 ggagagagg aggttgacct

20

<210> 448
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 448
 tgggctcata ccagggttg 20

<210> 449
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 449
 cccctcccag atagatgggc 20

<210> 450
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 450
 tgagtcggtc acccttctcc 20

<210> 451
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 451

gattgatctc agcgctgagt		20
<210>	452	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	452	
cgagatagtc gggccgattg		20
<210>	453	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	453	
caaagtagac ctgcccagac		20
<210>	454	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	454	
acagggcaat gatcccaaag		20
<210>	455	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	

<400>	455	
atgttcgtcc tcctcacagg		20
<210>	456	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	456	
gtttgggaag gttggatggt		20
<210>	457	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	457	
aagaggttga ggggtgtctga		20
<210>	458	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	458	
ctctttttga gccagaagag		20
<210>	459	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	459	
cctaagcccc	caattctctt	20
<210>	460	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	460	
agcttggggtt	ccgaccctaa	20
<210>	461	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	461	
ttgcttaaag	ttctaagctt	20
<210>	462	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	462	
gaagtgggtg	tcttgttgct	20
<210>	463	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	463	
tgaatcccag	gtttcgaagt	20
<210>	464	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	464	
caggccacac	attcctgaat	20
<210>	465	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	465	
cagcacttca	ctgtgcaggc	20
<210>	466	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	466	
attcttagtg	gttgccagca	20
<210>	467	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	467	
gaggccccag ttgaattct		20
<210>	468	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	468	
ccccagtgag ttctggaggc		20
<210>	469	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	469	
gatcaaagct gtaggccccca		20
<210>	470	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	470	
attccagatg tcagggatca		20
<210>	471	

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic
 <400> 471
 ctccctgggtc tccagattcc

20

<210> 472
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 472
 ggccagaacc aaaggctccc

20

<210> 473
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 473
 gtctctgcagc attctggcca

20

<210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 474
 gtgaggtcct ctcaagtctt

20

<210> 475
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 475
 tgtgtcaatt tctaggtgag 20

<210> 476
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 476
 ggccctaaggt ccacttgtgt 20

<210> 477
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 477
 atctggagag aggaaggcct 20

<210> 478
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 478

aggaagtcctg gaaacatctg	20
<210> 479	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 479	
gggctccgtg tctcaaggaa	20
<210> 480	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 480	
aaatagaggg agctggctcc	20
<210> 481	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 481	
cacaagtgca aacataaata	20
<210> 482	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	

<400>	482	
tcccaaataa	atacattcat	20
<210>	483	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	483	
caggataccc	cggtctccca	20
<210>	484	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	484	
ctacattggg	tcccccagga	20
<210>	485	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	485	
gagccaaggc	agctcctaca	20
<210>	486	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	Synthetic	
<400>	486	
acggaaaaca	tgtctgagcc	20
<210>	487	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	487	
ttcagctccg	ttttcacgga	20
<210>	488	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	488	
gggaacagcc	tattgttcag	20
<210>	489	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	489	
tcaaaagaag	gcacagagggc	20
<210>	490	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	490	
ttttaaaaaa	cataatcaaa	20
<210>	491	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	491	
ttaatcagat	aaatatttta	20
<210>	492	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	492	
cattgtttag	acaacttaat	20
<210>	493	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	493	
tggtcaccaa	atcagcattg	20
<210>	494	
<211>	20	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	494	
	gcaatgagtg acagttgggc	20
<210>	495	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	495	
	gggagcagag gctcagcaat	20
<210>	496	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	496	
	atagtagggc gattacagac	20
<210>	497	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	497	
	atttctcgcc actgaatagt	20
<210>	498	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	498	20
ctgattagag agagggtccc		
<210>	499	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	499	20
ctgattagag agagggtcc		
<210>	500	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	500	20
tgagtgtctt ctgtgtgcc		
<210>	501	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	501	20
gagtgtcttc tgtgtgccag		

<210> 502
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 502
caccaagctg cggtcccca

<210> 503
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 503
tccgtcatcg ctctcaggg